

Bureau of Standards

Certificate of Analyses

OF

STANDARD SAMPLE No. 32a

CHROME-NICKEL STEEL

ANALYST	CAR- BON	SILICON		PHOS- PHOR- US	SULPHUR		MANGANESE		CHROMIUM		NICKEL		COP- PER
	DIRECT COMBUS- TION	SULPHURIC ACID DEHYDRATION	OTHER METHODS	ALKALI- MOLYBDATE	GRAVIMETRIC (DIRECT OXIDATION)	EVOLUTION (ZnS-KI-KIO ₃)	BISMUTHATE	OTHER METHODS	PERFULPHATE OXIDATION	OTHER METHODS	WEIGHING NICKEL-DI- METHYL GLY- OXIME	OTHER METHODS	Cu S-Cu O
1.....	0.400	0.114		{0.021 ^r 0.021	0.016	0.018	0.240		0.890	0.90 ^a	1.56		0.068
2.....	.380	.123		.020	.019		.250		.891		1.53		.060
3.....	.389	.103	0.108 ^b	.020	.017		.239		.873	.88 ^a	1.57		.081
4.....	.414	.119		.018		{.018 ^c .018		0.27 ^a		.89 ^e		1.59	
5.....	.37		.112 ^f	.021	.015	.021 ^g	.255	.255 ^h	.890	.905 ⁱ	1.58	1.57 ^j	.083 ^k
6.....	{.41 ^l .40		.12 ^b	.021		.020 ^g	.27 ^m		.89 ^e		1.58 ^j	.08 ⁿ	
7.....	.385	.112		.019	.020	.018	.231		.912	.910 ^a	1.56		.061
8.....	.39	.105	.085 ^o	.019		{.018 ^g .018	.238	.246 ^p	.88		1.53	1.63 ^j	.06
9.....	.391	.111		.018	.015	.014	.245		.88		1.58		.07 ^k
10.....	.409	.114		.022	.018	.015 ^g	.227		.849	.846 ^e	1.58 ^j	.068 ⁿ	
11.....	.400	.110		{.017 ^r .018	.016	.016	.258	.252 ^g		.859 ^e	1.54		.082
12.....	.384	.113	.107 ^b	.020	.018		.231		.903		1.59		.089
13.....	.423		.102 ^b	.020	.018	.017 ^g	.24		.882 ^s		1.52		.094
14.....	.388	.113		{.019 ^t .020	.017	.016	.225	.235 ^p	.865		1.57	1.57 ^j	.08 ^k
AVERAGE	0.396	0.112	0.106	0.020	0.017	0.018	0.242	0.252	0.883	0.885	1.56	1.59	0.075
GENERAL AVERAGE.....	0.396	0.110		0.020	0.017*	0.018	0.244		0.884†		1.57		0.075

* Recommended value.
 † Recommended value, 0.89.
 a B. S. Hydrolysis and fusion method.
 b Drown's method.
 c Evolution in H+HCl vapor at 950° C. to 1,000° C.
 d PbO₂-arsenite.
 e Permanganate oxidation.
 f HCl-HNO₃ solution.
 g Absorbed in ammoniacal CdCl₂.
 h Electrometric titration with HgNO₃ after bismuthate oxidation.
 i Electrometric titration.

j Final KCN titration.
 k Na₂S₂O₃ precipitation—CuS—CuO.
 l Reburned.
 m Bismuthate-arsenite.
 n Na₂S₂O₃-electrolysis.
 o Solution in HCl-HNO₃-H₂SO₄.
 p Persulphate-arsenite.
 q William's method.
 r Filtered before addition of Molybdate.
 s KClO₃ oxidation.
 t Weighing yellow precipitate.

INDEX TO ANALYSTS

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|---|---|
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